

AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph on page 17 with the following amended paragraph:

It is to be noted that the Streptomyces sp. Mer-11107 was deposited as FERM P-18144 at the National Institute of Bioscience and Human-Technology Agency of Industrial Science and Technology (1-3, Higashi 1-chome Tsukuba-shi, Ibaraki-ken 305-8566 Japan) as of December 19, 2000, and then transferred to International Deposit FERM BP-7812 at International Patent Organism Depository (IPOD) National Institute of Advanced Industrial Science and Technology (Tsukuba Central 6, 1-1, Higashi 1-Chome, Tsukuba-shi, Ibaraki-ken 305-8566 Japan) as of November 27, 2001. The A-1544 strain was deposited as FERM BP-8446 at International Patent Organism Depository National Institute of Advanced Industrial Science and Technology (Tsukuba Central 6, 1-1, Higashi 1-Chome, Tsukuba-shi, Ibaraki-ken 305-8566 Japan) as of July 23, 2002, and then transferred to International Deposit FERM BP-8446 as of July 30, 2003, at International Patent Organism Depository (IPOD) National Institute of Advanced Industrial Science and Technology (Tsukuba Central 6, 1-1, Higashi 1-Chome, Tsukuba-shi, Ibaraki-ken 305-8566 Japan). The A-1560 strain was deposited as FERM P-19585 at International Patent Organism Depository National Institute of Advanced Industrial Science and Technology (Tsukuba Central 6, 1-1, Higashi 1-Chome, Tsukuba-shi, Ibaraki-ken 305-8566 Japan) ~~the National Institute of Bioscience and Human Technology Agency of Industrial Science and Technology (1-3, Higashi 1-chome Tsukuba-shi, Ibaraki-ken 305-8566 Japan)~~ as of November 13, 2003 and then transferred to International Deposit FERM BP-10102 as of August 19, 2004, at International Patent Organism Depository (IPOD) National Institute of Advanced Industrial Science and Technology (Tsukuba Central 6, 1-1, Higashi 1-Chome, Tsukuba-shi, Ibaraki-ken 305-8566 Japan).

Please replace the paragraph beginning on page 34, line 18 and ending on page 35, line 9 with the following amended paragraph:

The "unsaturated C₂₋₂₂ alkyl group" used in the specification of the present application indicates a linear or branched alkenyl group having 2 to 22 carbon atoms or a linear or branched

alkynyl group having 2 to 22 carbon atoms, such as vinyl group, allyl group, 1-propenyl group, isopropenyl group, 2-methyl-1-propenyl group, 2-methyl-2-propenyl group, 1-but enyl group, 2-but enyl group, 3-but enyl group, 1-pentenyl group, 1-hexenyl group, 1,3-hexadienyl group, 1,5-hexadienyl group, ~~1,3 hexanediethyl group~~, ~~1,5 hexanediethyl group~~, ethynyl group, 1-propynyl group, 2-propynyl group, 1-butynyl group, 2-butynyl group, 3-butynyl group, 1-ethynyl-2-propynyl group, 2-methyl-2-propynyl group, 1-pentynyl group, 1-hexynyl group, 1,3-hexadiynyl group or 1,5-hexadiynyl group. ~~1,3 hexanediynyl group or 1,5 hexanediynyl group~~. It preferably indicates a linear or branched alkenyl group having 2 to 10 carbon atoms or a linear or branched alkynyl group having 2 to 10 carbon atoms, such as vinyl group, allyl group, 1-propenyl group, isopropenyl group, ethynyl group, 1-propynyl group, 2-propynyl group, 1-butynyl group, 2-butynyl group or 3-butynyl group.

Please replace the paragraph beginning on page 35, line 19 and ending on page 36, line 36 with the following amended paragraph:

The "5-membered to 14-membered heteroaryl group" used in the specification of the present application means a monocyclic, bicyclic or tricyclic 5-membered to 14-membered aromatic heterocyclic group which contains one or more of hetero atoms selected from the group consisting of a nitrogen atom, sulfur atom and oxygen atom. Preferred examples thereof are a nitrogen-containing aromatic heterocyclic group such as pyrrolyl group, pyridyl pyridinyl group, pyridazinyl group, pyrimidinyl group, pyrazinyl group, triazolyl group, tetrazolyl group, benzotriazolyl group, pyrazolyl group, imidazolyl group, benzimidazolyl group, indolyl group, isoindolyl group, indolizinyl group, purinyl group, indazolyl group, quinolyl quinolinyl group, isoquinolyl isoquinolinyl group, quinolizinyl group, phthalazinyl group, naphthyridinyl group, quinoxalinyl group, quinazolinyl group, cinnolinyl group, pteridinyl group, imidazotriazinyl group, pyrazinopyridazinyl group, acridinyl group, phenanthridinyl group, carbazolyl group, carbazolinyl group, perimidinyl group, phenanthrolinyl group, phenazinyl group, imidazopyridinyl group, imidazopyrimidinyl group, or pyrazolopyridyl pyrazolopyridinyl group or pyrazolopyridinyl group; a sulfur-containing aromatic heterocyclic group such as thieryl group or benzothienyl group; and an oxygen-containing aromatic heterocyclic group such as

furyl group, pyranyl group, cyclopentapyranyl group, benzofuranyl benzofuryl group or isobenzofuranyl isobenzofuryl group; an aromatic heterocyclic group containing two or more different hetero atoms, such as thiazolyl group, isothiazolyl group, benzothiazolyl group, benzothiadiazolyl group, phenothiazinyl group, isoxazolyl group, furazanyl group, phenoxazinyl group, oxazolyl group, isoxazoyl group, benzoxazolyl group, oxadiazolyl group, pyrazolooxazolyl group, imidazothiazolyl group, thienofuranyl group, fuopyrrolyl group or pyridoxazinyl group, of which a preferred example is thienyl group, furyl group, pyridyl pyridinyl group, pyridazinyl group, pyrimidinyl group or pyrazinyl group.

Please replace the paragraph beginning on page 37, line 1 and ending on line 15 with the following amended paragraph:

The "3-membered to 14-membered nitrogen-containing non-aromatic heterocyclic group" used in the specification of the present application means a monocyclic, bicyclic or tricyclic 3-membered to 14-membered non-aromatic heterocyclic group containing one or more nitrogen atoms. Preferable examples thereof include an azolidinyl group, azetizyl group, pyrrolidinyl group, pyrrolyl group, piperidyl piperidinyl group, piperazinyl group, homopiperidinyl group, homopiperazinyl group, imidazolyl group, pyrazolidinyl group, imidazolidinyl, morpholinyl group, thiomorpholinyl group, imidazolinyl group, oxazolinyl group and quinuclidinyl group. The nitrogen-containing non-aromatic heterocyclic group also includes a group derived from a pyridone ring and a non-aromatic condensed ring (such as a group derived from a phthalimide ring or succinimide ring).

Please replace the paragraph beginning on page 37, line 16 and ending on line 25 with the following amended paragraph:

The "C₂₋₂₂ alkanoyl group" used in the specification of the present application means a group corresponding to the above-defined "C₁₋₂₂ alkyl group" in which the end thereof is a carbonyl group. Examples thereof thereof include acetyl group, propionyl group, butyryl group, iso-butyryl group, valeryl group, iso-valeryl group, pivaloyl pivalyl group, caproyl group, decanoyl group, lauroyl group, myristoyl group, palmitoyl group, stearoyl group and arachidoyl

group. Preferable examples thereof include alkanoyl groups having 2 to 6 carbon atoms such as acetyl group, propionyl group, butyryl group or iso-butyryl group.

Please replace the paragraph beginning on page 38, line 7 and ending on line 14 with the following amended paragraph:

The "C₃₋₂₃ unsaturated alkanoyl group" used in the specification of the present application means a group corresponding to the above-defined "unsaturated C₂₋₂₂ alkyl group" to which end a carbonyl group is bonded. Examples thereof include an acryloyl group, propiolyol group, crotonoyl group, iso-crotonoyl group, oleoyl oleoyl group and linolenoyl group. Preferable examples thereof include unsaturated alkanoyl groups having 2 to 6 carbon atoms and specifically an acryloyl group.

Please replace the paragraph beginning on page 38, line 25 and ending on page 39, line 14 with the following amended paragraph:

The "C₁₋₂₂ alkoxy group" used in the specification of the present application means a group corresponding to the above-defined "C₁₋₂₂ alkyl group" to which end an oxygen atom is bonded. Suitable examples thereof are methoxy group, ethoxy group, n-propoxy group, iso-propoxy group, n-butoxy group, iso-butoxy group, sec-butoxy group, tert-butoxy group, n-pentyloxy group, iso-pentyloxy group, sec-pentyloxy group, n-hexyloxy group, iso-hexyloxy group, 1,1-dimethylpropoxy group, 1,2-dimethylpropoxy group, 2,2-dimethylpropoxy group, 2-ethylpropoxy group, 1-ethyl-2-methylpropoxy group, 1,1,2-trimethylpropoxy group, 1,2,2-trimethylpropoxy group, 1,1-dimethylbutoxy group, 1,2-dimethylbutoxy group, 2,2-dimethylbutoxy group, 2,3-dimethylbutoxy group, 1,3-dimethylbutoxy group, 2-ethylbutoxy group, 1,3-dimethylbutoxy group, 2-methylpentyloxy group and 3-methylpentyloxy group, 3-methylpentyloxy group and hexyloxy group.

Please replace the paragraph beginning on page 40, line 7 and ending on page 41, line 12 with the following amended paragraph:

The "5-membered to 14-membered heteroaryloxy group" used in the specification of the present application means a group corresponding to the above-defined "5-membered to 14-membered heteroaryl group" to which end an oxygen atom is bonded. Specific examples thereof are pyrrolyloxy group, pyridyloxy group pyridinylloxy group, pyridazinylloxy group, pyrimidinylloxy group, pyrazinylloxy group, triazolylloxy group, tetrazolylloxy group, benzotriazolylloxy group, pyrazolylloxy group, imidazolylloxy group, benzimidazolylloxy group, indolylloxy group, isoindolylloxy group, indolizinylloxy group, purinylloxy group, indazolylloxy group, quinolylloxy group, isoquinolylloxy group quinolinylloxy group, isoquinolinylloxy group, quinolizinylloxy group, phthalazinylloxy group, naphthyridinylloxy group, quinoxalinylloxy group, quinazolinylloxy group, cinnolinylloxy group, pteridinylloxy group, imidazotriazinylloxy group, pyrazinopyridazinylloxy group, acridinylloxy group, phenanthridinylloxy group, carbazolylloxy group, carbazolinyloxy group, perimidinylloxy group, phenanthrolinylloxy group, phenazinylloxy group, imidazopyridinylloxy group, imidazopyrimidinylloxy group, pyrazolopyridyloxy group pyrazolopyridinylloxy group, thienylloxy group, benzothienylloxy group, furyloxy group, pyranylloxy group, cyclopentapyranylloxy group, benzofuryloxy group, isobenzofuryloxy group, thiazolylloxy group, isothiazolylloxy group, benzothiazolylloxy group, benzothiadiazolylloxy group, phenothiazinylloxy group, isoxazolylloxy group, furazanyloxy group, phenoxazinylloxy group, oxazolylloxy group, isoxazoyloxy group, benzoxazolylloxy group, oxadiazolylloxy group, pyrazolooxazolylloxy group, imidazothiazolylloxy group, thienofuranyloxy group, furopyrrolyloxy group and pyridoxazinylloxy group, of which a preferred example is thienylloxy group, furyloxy group, pyridyloxy group, pyridazyloxy group, pyrimidyloxy group or pyrazyloxy group.

Please replace the paragraph beginning on page 42, line 8 and ending on page 45, line 3 with the following rewritten paragraph:

Examples of the substituent in the term "may have a substituent" used in the specification of the present application include those selected from the group consisting of:

- (1) halogen atom;
- (2) hydroxyl group;
- (3) thiol group;
- (4) nitro group;
- (5) nitroso group;
- (6) cyano group;
- (7) carboxyl group;
- (8) sulfonyloxy group;
- (9) amino group;
- (10) a C₁₋₂₂ alkyl group (for example, methyl group, ethyl group, n-propyl group, iso-propyl group, n-butyl group, iso-butyl group, sec-butyl group and tert-butyl group);
- (11) an unsaturated C₂₋₂₂ alkyl group (for example, vinyl group, allyl group, 1-propenyl group, isopropenyl group, ethynyl group, 1-propinyl group, 2-propinyl group, 1-butynyl group, 2-butynyl group and 3-butynyl group);
- (12) a C₆₋₁₄ aryl group (for example, phenyl group, 1-naphthyl group and 2-naphthyl group);
- (13) a 5-membered to 14-membered heteroaryl group (for example, thieryl group, furyl group, pyridyl pyridinyl group, pyridazinyl group, pyrimidinyl group and pyrazinyl group);

(14) a 3-membered to 14-membered nitrogen-containing non-aromatic heterocyclic group (for example, aziridinyl group, azetidyl group, pyrrolidinyl group, pyrrolyl group, piperidyl piperidinyl group, piperazinyl group, imidazolyl group, pyrazolidinyl group, imidazolidinyl, morpholinyl group, imidazolinyl group, oxazolinyl group and quinuclidinyl group);

(15) a C₁₋₂₂ alkoxy group (for example, methoxy group, ethoxy group, n-propoxy group, iso-propoxy group, sec-propoxy group, n-butoxy group, iso-butoxy group, sec-butoxy group and tert-butoxy group);

(16) a C₆₋₁₄ aryloxy group (for example, phenoxy group, 1-naphthyoxy group and 2-naphthyoxy group);

(17) a C₇₋₂₂ aralkyloxy group (for example, benzyloxy group, phenethyloxy group, 3-phenylpropyloxy group, 4-phenylbutyloxy group, 1-naphthylmethyloxy group and 2-naphthylmethyloxy group);

(18) a 5-membered to 14-membered heteroaryloxy group (for example, thienyloxy group, furyloxy group, pyridinyloxy group, pyridyloxy pyridazinyloxy group, pyrimidinyloxy group and pyrazinyloxy group);

(19) a C₂₋₂₃ alkanoyl group (for example, acetyl group, propionyl group, butyryl group, iso-butyryl group, valeryl group, iso-valeryl group, pivaloyl pivalyl group, caproyl group, decanoyl group, lauroyl group, myristoyl group, palmitoyl group, stearoyl group and arachidoyl group);

(20) a C₇₋₁₅ aroyl group (for example, benzoyl group, 1-naphthoyl group and 2-naphthoyl group);

(21) a C₃₋₂₃ unsaturated alkanoyl group (for example, acryloyl group, propioloyle group, crotonoyl group, iso-crotonoyl group, oleoyl eleoyl group and linolenoyl group);

(22) a C₂₋₂₃ alkanoyloxy group (for example, acetoxy group, propionyloxy group and acryloxy group);

(23) a C₂₋₂₂ alkoxy carbonyl group (for example, methoxycarbonyl group, ethoxycarbonyl group, n-propoxycarbonyl group, iso-propoxycarbonyl group, n-butoxycarbonyl group, iso-butoxycarbonyl group, sec-butoxycarbonyl group and tert-butoxycarbonyl group);

(24) an unsaturated C₃₋₂₂ alkoxy carbonyl group (for example, vinyloxycarbonyl group, aryloxycarbonyl group, 1-propenyloxycarbonyl group, isopropenyloxycarbonyl group, propargyloxycarbonyl group and 2-butyloxycarbonyl group);

(25) a C₁₋₂₂ alkylsulfonyl group (for example, methanesulfonyl group, ethanesulfonyl group, n-propanesulfonyl group and iso-propanesulfonyl group);

(26) a C₆₋₁₄ arylsulfonyl group (for example, benzenesulfonyl group, 1-naphthalenesulfonyl group and 2-naphthalenesulfonyl group); and

(27) a C₁₋₂₂ alkylsulfonyloxy group (for example, methanesulfonyloxy group, ethanesulfonyloxy group, n-propanesulfonyloxy group and iso-propanesulfonyloxy group).

Please replace the paragraph beginning on page 82, line 8 and ending on page 83, line 8 with the following rewritten paragraph:

A medium containing 2.0% of soluble starch, Stabilose, 2.0% of glucose, 2.0% of a soybean meal (Honen Soupro), 0.5% of yeast extract and 0.32% of CaCO₃ and having a pH of 7.4 was prepared. A 250 mL Erlenmeyer flask was charged with 25 mL of the medium, which was then sterilized under heating at 121°C for 20 minutes and thiostrepton was added to the medium such that its final concentration was 25 mg/L. Then, 1% of an A-1544/pIJDMG strain from frozen seed was inoculated to culture the seed at 28°C and 220 rpm for 3 days. 1% of the seed culture broth was added in a medium having the same composition to carry out main culturing at 28°C and 220 rpm for 2 days. After the main culturing was finished, mycelia were collected from the culture broth by centrifugation and suspended in 20 mL of phosphate buffer solution having a pH of 6.5. The substrate 11107H (100 g/L DMSO solution) was added in this mycelia suspended solution such that its final concentration was 2000 mg/L to run a conversion reaction at 28°C and 220 rpm for 16 hours.

Please amend the paragraph beginning on page 84, line 9 and ending on page 85, line 9 with the following amended paragraph:

A medium containing 2.0% of soluble starch, stabilose, 2.0% of glucose, 2.0% of a soybean meal (Honen Soupro), 0.5% of yeast extract and 0.32% of CaCO₃ and having a pH of 7.4 was prepared. A 250 mL Erlenmeyer flask was charged with 25 mL of the medium, which was then sterilized under heating at 121°C for 20 minutes and thiostrepton was added to the medium such that its final concentration was 25 mg/L. Then, 1% of an A-1544/pIJDMG strain from frozen stock was inoculated to cultivate the seed culture at 28°C and 220 rpm for 3 days. 1% of this seed culture broth was added in a medium having the same composition to carry out main cultivation at 28°C and 220 rpm for 2 days. After the main cultivation was finished, mycelia were collected from the culture broth by centrifugation and suspended in 20 mL of phosphate buffer solution having a pH of 6.5. The substrate 11107L (100 g/L DMSO solution) was added to this mycelia suspension solution such that its final concentration was 1600 mg/L to run a conversion reaction at 28°C and 220 rpm for 16 hours.